

**Amendment to the Claims:**

This listing of claims will replace all prior versions, and listing, of claims in the application.

**Listing of Claims:**

1. (currently amended): An audio accessory optimization system, comprising:  
  
a radio having a controller; and  
  
an audio accessory coupled to the radio, the audio accessory being controllerless, the audio accessory including an embedded memory coupled to the radio controller, the embedded memory containing audio optimization parameters to enable the radio to optimize the accessory audio performance, wherein the audio optimization parameters include a microphone acoustic model of microphone behavior as a function of accessory position. ~~at least one of: audio interface type, number of audio modes and signaling configuration, duplex capability, and receiver to transmitter transducer coupling parameters.~~
2. (original): The audio accessory optimization system of claim 1, wherein the radio is a portable radio.
3. (original): The audio accessory optimization system of claim 1, wherein the radio is a mobile radio.
4. (original): The audio accessory optimization system of claim 1, wherein the information contained in the embedded memory is organized in a hierarchical fashion.

5. (original): The audio accessory optimization system of claim 1, wherein the information contained in the embedded memory is used to create an encrypted digital signature that is also stored in the embedded memory.

6. (original): The audio accessory optimization system of claim 1, wherein the embedded memory uses a single wire bus data communications means.

7. (original): The audio accessory optimization system of claim 6, wherein the single wire bus data communications means comprises a 1-Wire<sup>®</sup> bus.

8. (currently amended): An audio accessory optimization system, comprising:  
an audio accessory having content information stored therein, the audio accessory being  
controllerless, the content information for conveying information pertaining to the accessory's  
audio characteristics, the accessory for coupling to any one of a plurality of radios each radio  
having different audio optimization parameters than the accessory and each radio having  
different audio optimization parameters from each other, wherein each of the plurality of  
radios includes a controller that detects the content information and optimizes the audio of the  
accessory in response thereto, wherein the content information includes variations in transmit  
audio parameters as a function of accessory microphone position. ~~at least one of: audio~~  
~~interface type, number of audio modes and signaling configuration, duplex capability, receive~~  
~~audio parameters, transmit audio parameters, and receiver to transmitter transducer coupling~~  
~~parameters.~~

Claim 9 cancelled

10. (previously presented): The audio accessory optimization system of claim 8,  
wherein the receive audio parameters include at least one of: power amplifier mode, line  
mode, transducer load impedance, maximum output level, effective sound pressure level  
(SPL), and cone envelope parameters.

Claim 11 cancelled.

12. (previously presented): The audio accessory optimization system of claim 10, wherein the transmit audio parameters includes at least one of: minimum microphone bias voltage, maximum microphone bias voltage, microphone electrical model parameters, microphone sensitivity, and microphone acoustic model.

13. (original): The audio accessory optimization system of claim 12 wherein the microphone acoustic model includes at least one of: sensor type and response variation with distance.

Claim 14 cancelled

15. (currently amended): An audio accessory, comprising  
audio optimization parameters stored in the audio accessory, the audio accessory being  
controllerless; and

the audio accessory for coupling to a variety of different radios, each radio having a  
controller and each audio accessory having different audio characteristics, the audio accessory  
being automatically adjusted by each radio controller based on the audio parameters stored in  
the audio accessory, wherein the audio optimization parameters include an acoustic model of  
microphone frequency response and sensitivity for the audio accessory as function of  
microphone position and at least one of: audio interface type, number of audio modes and  
signaling configuration, and duplex capability, ~~and receiver to transmitter transducer coupling~~  
~~parameters.~~

16. (original): The audio accessory of claim 15, wherein the audio accessory includes  
a memory device containing a plurality of descriptors that provide hierarchical information to  
enable radio optimization of the audio accessory audio performance.